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BEFORE THE  
POLLUTION CONTROL HEARINGS BOARD  
STATE OF WASHINGTON

IN THE MATTER OF )  
INTERNATIONAL PAPER COMPANY, )  
(Longbell Division), )  
Appellant, )  
v. )  
SOUTHWEST AIR POLLUTION )  
CONTROL AUTHORITY, )  
Respondent. )

PCHB Nos. 77-55, 77-84 and 77-94

FINAL FINDINGS OF FACT,  
CONCLUSIONS OF LAW  
AND ORDER

This matter, the appeal of eleven \$250 civil penalties for emissions stemming from two hog fuel boilers, came on for hearing before the Pollution Control Hearings Board, all members present, convened at Lacey, Washington on October 20 and 21, 1977. Hearings Board Chairman W. A. Gissberg presided. Respondent elected a formal hearing.

Appellant appeared by and through its attorney, Charles R. Blumenfeld. Respondent appeared by and through its attorney, James D. Ladley. Olympia court reporter Eugene E. Barker provided court reporting services.

Witnesses were sworn and testified. Exhibits were examined. From

1 testimony heard and exhibits examined, the Pollution Control Hearings  
2 Board makes these

### 3 FINDINGS OF FACT

#### 4 I

5 This appeal concerns two wood-products mills owned and operated by  
6 appellant, International Paper Company. One is located at Arbo  
7 (Chelatchie), Washington, the other at Longview, Washington. The mills  
8 produce poles, particle board and plywood.

9 At each of the mill sites, appellant owns and operates a "hog fuel  
10 boiler." As waste wood is generated in the normal making of wood product  
11 it is ground into particles by a "hog" (hence the name hog fuel). This  
12 hog (waste wood) fuel is then burned in the hog fuel boiler, water is  
13 heated, steam is produced, and the energy from this steam powers the  
14 mill equipment. During this process, smoke from the hog fuel fire is  
15 emitted, from one or more smokestacks, into the ambient air.

#### 16 II

17 Since April 1, 1977, the appellant has made various operational and  
18 equipment changes so as to minimize the frequency and severity of visual  
19 emissions and continues to seek other improvements to mitigate air  
20 pollution. Notwithstanding such, however, the visual emission problems  
21 of appellant have not been entirely eliminated.

#### 22 III

23 Inspectors of respondent, Southwest Air Pollution Control Authority  
24 observed and recorded emissions of greater than 20 percent opacity,  
25 emanating from appellant's hog fuel boilers, on these dates and for  
26 these durations (the letters preceding each date are those used by

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1 the parties for identification):

2			Within	After	
3		<u>Date</u>	<u>First</u>	<u>First</u>	<u>Total</u>
			<u>15 min.</u>	<u>15 min.</u>	<u>Minutes</u>
4	A)	April 1, 1977	8-1/2	1/4	8-3/4
5	B)	April 6, 1977	7-3/4	3/4	8-1/2
6	D)	April 11, 1977	5	4-1/4	8-1/4
7	F)	April 27, 1977	9-3/4	---	9-3/4
8	H)	May 20, 1977	8-3/4	7-1/4	16
9	I)	May 23, 1977	11-1/2	5-1/4	16-3/4
10	L)	June 27, 1977	15	1	16
11	M)	June 29, 1977	13-1/4	4-1/2	17-3/4
12	O)	June 30, 1977	15	1	16
13	P)	June 30, 1977	15	1	16
14	Q)	June 24, 1977	15	1	16

15 The appellant caused each of the emissions to which the above readings  
16 pertain.

17 For white plumes, such as those here involved, 99 percent of readings  
18 are made with a positive error of less than 7.5 percent opacity; 95 percent  
19 were read with a positive error of less than 5 percent opacity.

20 IV

21 Opacity is the degree to which emissions reduce the transmission of  
22 light and obscure the view of an object in the background. An observer's  
23 perception of plume opacity depends on a number of variables. These  
24 include the position of the sun, the speed and direction of the wind, and  
25 the distance at which the observation is made. The respondent has printed  
a Standard Operating Procedure (Exhibit A-2) which requires the observer

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1 to record, inter alia, the speed and direction of the wind and the  
2 estimated distance to the emission. This Procedure also directs the  
3 observer to follow the "general criteria" for reading opacity established  
4 by the Department of Ecology (Exhibit R-6) which is derived from criteria  
5 developed by the U. S. Environmental Protection Agency (Exhibit R-3).

6 Sun. The observer must not read opacity with the sun in front of  
7 him. This is especially so if the sun is behind and shining through the  
8 plume being read. In this position "forward light scattering" exaggerates  
9 the plume's opacity. In each of the eleven instances relevant to this  
10 appeal, however, plume opacity was read with the sun either behind or  
11 over the observer and not in front of him. Observations identified as  
12 B, D, F, O, P, and Q (see Finding of Fact III, supra) were made with the  
13 sun overhead. Other observations were made with the sun behind the  
14 observer or hidden by cloud cover.

15 Speed and Direction of the Wind. As much as possible, the observer  
16 should make his observation from a position such that his line of vision  
17 is approximately perpendicular to the plume direction. Although mild  
18 winds bent the distal portion of the plumes in some instances, respondent  
19 observers read the plume's opacity where the plume remained vertical due  
20 to its exit force. Thus, the speed and direction of the wind did not  
21 affect the portion of the plume being read which, being vertical, was  
22 perpendicular to the observer's line of vision.

23 Distance. Respondent does not recognize a fixed maximum distance  
24 for opacity reading. No such maximum distance has been established by  
25 the Department of Ecology or the U. S. Environmental Protection Agency  
26 in the opacity reading criteria now in evidence (Exhibits R-6 and R-3).

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1 Observations identified as O and P were made from a distance of some  
2 560 yards. Other observations were made at substantially lesser distances.

3 Double Plume. The observer's line of sight should not include more  
4 than one plume at a time when multiple stacks are involved. The  
5 observation identified as Q was made upon the combined plume from both  
6 stacks of the Amboy (Chelatchie) hog fuel boiler.

7 V

8 In each of the eleven instances now on appeal, a formal Notice of  
9 Violation, assessing a \$250 civil penalty, was served upon appellant.

10 VI

11 Any Conclusion of Law which may be deemed a Finding of Fact, is  
12 hereby adopted as such.

13 From these Findings, the Pollution Control Hearings Board comes  
14 to these

15 CONCLUSIONS OF LAW

16 I

17 The Washington Clean Air Act, at RCW 70.94.431, requires a Notice  
18 of Violation to describe the violation with "reasonable particularity."  
19 Appellant seeks the dismissal of all penalties in this appeal on grounds  
20 that each Notice of Violation alleged "violation of Article IV, Section  
21 4.02 of Regulation I [of respondent] and/or Section 173-400-040"  
22 (emphasis added). Appellant argues that such language does not inform  
23 it as to which regulation is at issue and so does not describe the  
24 violation with reasonable particularity. We disagree.

25 The notice of violation is similar to the effect of a summons

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1 in a civil action<sup>1</sup>. When appealed to this Hearings Board it also  
2 has the effect of a civil complaint. The Pollution Control Hearings  
3 Board has adopted comprehensive rules of procedure<sup>2</sup> governing not only  
4 the conduct of its hearings, but also providing for the pre-trial  
5 procedures of the superior courts<sup>3</sup>. Rule 8(e)(2) of Rules for  
6 Superior Court permits alternative claims. Furthermore, all of the  
7 various pre-trial motions and discovery proceedings are made available  
8 to parties before this Board by virtue of WAC 371-08-145.

9 We conclude that respondent's alternative pleading complies  
10 with RCW 70.94.431 and describes the alleged violation with "reasonable  
11 particularity".

## 12 II

13 On the facts of this case, the state-wide regulations, WAC 173-400-(  
14 and 173-400-070(2),<sup>4</sup> are more stringent than respondent's regional  
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16 1. Yakima County Clean Air Authority v. Glascam Builders, Inc.,  
17 85 Wn.2d 255 at 260 (1975)

18 2. chapter 371-08 WAC.

19 3. WAC 371-08-145.

20 4. Quoted in Conclusion of Law III.

1 regulations, Sections 4.02(a) and (b)<sup>5</sup>. It therefore follows that  
2 respondent's regional regulations are unenforceable, RCW 70.94.331(2)(b).  
3 Whether on some other facts the regional regulations just cited are  
4 more stringent than the state-wide regulations, and whether such a  
5 turnabout is contrary to law, are questions which must await a future  
6 case and which are not now ripe for decision. We note in passing,  
7 however, that the respondent possesses full authority to amend its  
8 regional regulations in such a way as to blend the requirements now  
9 found there, and in corresponding state-wide regulations, into a single  
10 harmonious set of regulations.

### 11 III

12 The pertinent requirements of WAC 173-400-040, applicable state-wide,  
13 are as follows:

14  
15 5. Respondent, pursuant to RCW 43.21B.260, has filed with this  
16 Hearings Board a certified copy of its Regulation I containing respondent's  
17 regulations and amendments thereto. Sections 4.02(a) and (b) are as  
follows:

- 18 (a) No person shall allow, cause, let, permit, or suffer the  
19 emission, for more than three minutes in any hour, of a gas stream  
20 containing air contaminants which is:  
21 (1) Darker in shade as that designated as No. 2 on the  
Ringelmann Chart as published by the United States Bureau  
22 of Mines or;  
23 (2) Of such opacity as to obscure an observers view to  
24 a degree equal to or greater than smoke shade No. 2  
25 described above.
- (b) When the gas stream is an emission from a boiler using  
hogfuel, and an emission occurs which is due to conditions beyond  
the control of the operator, the emission may be darker than that  
designated as No. 2 but not as dark as that designated as No. 3  
on the Ringelmann Chart for a period of not more than six minutes  
in any one hour; provided that the operator shall take immediate  
action to correct the situation.

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1 . . . (1) Visible emissions.

2 No person shall cause or permit the emission for more than  
3 three minutes, in any one hour, of an air contaminant from any  
4 source which at the emission point, or within a reasonable  
5 distance of the emission point, exceeds 20% opacity except as  
6 follows:

7 (a) When the person responsible for the source can demon-  
8 strate that the emissions in excess of 20% will not exceed 15  
9 minutes in any consecutive 8 hours.

10 (b) When the owner or operator of a source supplies valid  
11 data to show that the opacity is in excess of 20% as the result  
12 of the presence of condensed water droplets, and that the  
13 concentration of particulate matter, as shown by a source test  
14 approved by the director, is less than one-tenth (0.10) grains  
15 per standard dry cubic foot. For combustion emissions the  
16 exhaust gas volume shall be corrected to 7% oxygen.

17 The pertinent requirements of WAC 173-400-070, which is a state-wide  
18 special rule for hog fuel boilers, are as follows:

19 (2) Hog fuel boilers.

20 (a) Hog fuel boilers shall meet all provisions of WAC  
21 173-400-040 and WAC 173-400-050(1), except that emissions  
22 caused by conditions beyond the control of the owner or  
23 operator may exceed 20% opacity for up to 15 consecutive  
24 minutes once in any 4 hours provided that the operator shall  
25 take immediate action to correct the condition.

26 (b) All hog fuel boilers shall utilize best practical  
27 technology and shall be maintained and operated to minimize  
28 emissions.

29 (c) The director may establish additional requirements  
30 for hog fuel boilers located in or proposed for location in  
31 sensitive areas.

32 With regard to the latter regulation, emissions "beyond the control of the  
33 owner or operator" may occur in the normal course of operating a hog fuel  
34 boiler. It follows, therefore, that such emissions are not the result of  
35 upset nor breakdown, and do not trigger the notification requirements of  
36 WAC 173-400-120(4). On appeal, the owner or operator is not barred from  
37 claiming the application of the special hog fuel rule, WAC 173-400-070(2)  
38 above, merely because it gave no notice of such an intention to responder  
39 in the field. There is no requirement of notification in WAC 173-400-07

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1 the special hog fuel rule.

2 In order to qualify for the special provisions of WAC 173-400-070(2),  
3 an appellant must prove that the excessive hog fuel emissions were  
4 beyond the control of the boiler owner. In this appeal, appellant  
5 has shown that he has designed and is implementing a program of  
6 operational and equipment changes to minimize visual emissions. Having  
7 done so, the excessive emissions which occur in normal operation, such  
8 as all those now before us, are beyond appellant's control as owner or  
9 operator. Appellant has therefore qualified itself for the application of  
10 WAC 173-400-070(2) in this appeal, although in future appeals the question  
11 of whether emissions are "beyond control," and hence the availability of  
12 this special provision, will depend upon the degree to which operational  
13 and equipment changes have kept pace with and minimized visual emissions.

14 Because of the application of WAC 173-400-070(2), instances identified  
15 as A, B and F are not violations. This is so because the fifteen minute  
16 special allowance of that section left isolated excessive emissions, if any,  
17 which were insufficient to constitute violation of the general visual  
18 emission rule, WAC 173-400-040, (see the column labeled "After First 15  
19 Minutes" in Finding of Fact III). In the absence of contradicting  
20 evidence, as here, control of excessive emissions within the fifteen  
21 minute allowance demonstrates that the appellant took immediate action to  
22 correct the excessive emissions as required by WAC 173-400-070(2).

23 IV

24 While reading opacity may not be an exact science, it nonetheless is  
25 a legally acceptable method of detecting air pollution. Sitner v. Seattle,  
62 Wn.2d 834 (1963).

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1 In Ross-Simmons Hardwood Lumber v. SWAPCA, PCHB No. 1022 (1976), we  
2 recognized a de minimus error which inheres in opacity readings even und  
3 optimal conditions. Evidence in this case has quantified this error as  
4 less than 5% opacity in 95% of readings (see Finding of Fact III supra).  
5 We conclude that this error is so minimal that, standing alone, it will  
6 not so impugn the reliability of otherwise proper opacity readings and s  
7 will not result in the reversal of any violation.

8 V

9 Appellant points to "criteria" established by respondent, the  
10 Department of Ecology, and the U. S. Environmental Protection Agency, fo  
11 making opacity readings. These criteria and respondent's adherence to t  
12 were found in Finding of Fact IV, supra.

13 These criteria are not legal standards, every element of which must  
14 be proven to sustain a violation (the opacity levels of 173-400 WAC are  
15 the legal standards defining violation). While not every deviation from  
16 the criteria is fatal to proving a violation, there can be so much  
17 deviation that the reliability of the opacity readings will fall below  
18 the legal minimum necessary to sustain a violation. Likewise, the fact  
19 that an inspector's field notes do not demonstrate compliance with one o  
20 the criteria is not, of itself, fatal to proving a violation. Yet field  
21 notes and testimony can be so spotty as to reduce the reliability of the  
22 opacity readings below the legal minimum for sustaining a violation.  
23 It is a matter of proof and preponderance.

24 We conclude that the combination of inherent error, marginal sun  
25 position and lengthy distance from which the observation was made result  
26 in unreliable opacity readings in the instances identified as O and P, .

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1 that the same are not violations of either WAC 173-400-040 or 173-400-070(2)  
2 We further conclude that the combination of inherent error, marginal sun  
3 position and the reading of a double plume resulted in unreliable opacity  
4 readings in the instance identified as Q, and that the same is not a  
5 violation of either WAC 173-400-040 or 173-400-070(2). We finally conclude  
6 that opacity readings were reliable in the instances identified as D, H,  
7 I, L and M and that each is a violation of WAC 173-400-070(2).

8 VI

9 The \$250.00 penalty assessed for each of the sustained violations  
10 is reasonable in the circumstances.

11 VII

12 Any Finding of Fact which may be deemed a Conclusion of Law is  
13 hereby adopted as such.

14 From these Conclusions the Pollution Control Hearings Board  
15 enters this

16 ORDER

17 The violation and \$250.00 civil penalty set out in the following  
18 Notices of Violation are hereby affirmed:

19 D) April 11, 1977  
20 H) May 20, 1977  
21 I) May 23, 1977  
L) June 27, 1977  
M) June 29, 1977.

22 The violation and \$250.00 civil penalty set out in the following  
23 Notices of Violation are hereby reversed:

24 A) April 1, 1977  
25 B) April 6, 1977  
F) April 27, 1977  
O) June 30, 1977  
3 P) June 30, 1977  
Q) June 24, 1977.

27 FINAL  
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1 DONE at Lacey, Washington, this 28<sup>th</sup> day of November, 1977.

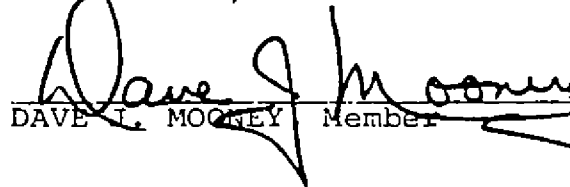
2 POLLUTION CONTROL HEARINGS BOARD

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6 CHRIS SMITH, Member

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